Apr 23rd, 9:15 AM

Supporting High School Students' New Literacy Through s Critical Mathematics Lens

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SUPPORTING HIGH SCHOOL STUDENTS' NEWS LITERACY THROUGH A CRITICAL MATHEMATICS LENS

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High school mathematics is often seen as a politically-neutral, context free subject. Yet the global pandemic has once again highlighted the need for the U.S. public to be able to critically interpret mathematics in the media. Too often members of the general public – or worse, our elected officials – misinterpret and misrepresent mathematics. This research sought to explore how to productively disrupt the normative high school mathematics curriculum in order to support students' news literacy through a critical mathematics lens. This took the form of co-designing a unit with students and teachers from across disciplines and modifying a literacy tool which can be used to analyze media from a critical mathematics perspective. The teacher researcher then taught the unit in an Integrated Mathematics I Honors course at a large high school in Chicago, IL. After drawing on artifact analysis to share and discuss the development of this tool, this talk will describe how it served as a powerful way to cultivate students' ability to analyze, discuss, and respond to current events, including an unplanned discussion around President Trump's late-night, post-election statement. Teacher-researcher reflections indicate that the integration and application of this tool throughout the unit revealed the false narrative of math as apolitical to students. Additional reflections indicate students' ability to analyze and respond to news from a critical mathematics perspective developed throughout the course of the unit, resulting in a sense of empowerment for students in their ability to actively interpret and, if necessary, counter claims in the media. This research indicates that teaching mathematics from a critical literacy perspective not only results in students' ability to use mathematics to critically interpret news media, but also subverts existing discourses about the purposes of mathematics education. The teacher-researcher will present and discuss the development of the math critical literacy tool for the purpose of sharing both the importance of this type of learning in high school mathematics classrooms, and also to provide a useful guide for teachers to utilize in their own classrooms.